1946

Trego County Real Estate Assessment Plan

Vernon T. Clover

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by Vernon T. Clover

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FORT HAYS KANSAS STATE COLLEGE STUDIES

GENERAL SERIES NUMBER ELEVEN

ECONOMICS SERIES No. 3

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By VERNON T. CLOVER

Associate Professor of Economics, Department of Economics and Business Administration

Fort Hays Kansas State College

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F. B. STREETER, *Editor*

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PREFACE

This study of the Trego County Real Estate Assessment Plan was undertaken in order to bring its main elements together into a systematic form. The philosophy of the plan and its technical application are explained. One of the most important facts about the plan is that it *is* in actual use and has been since 1938. Perfection has not been attained, but increased fairness in real estate assessment has resulted from this successful attempt to improve the process of valuation of property for purposes of taxation.

Mr. Worden R. Howat was county clerk and county assessor in Trego county, Kansas, for eight years, 1937-1944. He worked out and applied a plan involving the use of several standard yardsticks of value which he thought were best suited to his county. It is that plan which is discussed here, and it is frequently called the Howat Plan in this study. The writer greatly appreciates the assistance given by Mr. Howat in preparing this study. Mrs. Berniece Groft, county clerk in 1946, was quite coöperative, also.

VERNON T. CLOVER

TABLE OF CONTENTS

CHAPTER I

SUMMARY

Purpose of Plan

The purpose of the Trego County Real Estate Assessment Plan is to equalize taxes by the application of a method of valuation that assures that each parcel of property will be assessed at the same percentage of normal market value. The determiner of normal market value is considered to be the long run average net income producing ability of a parcel of property. This is the meaning of "fairness" and "equality" in assessment as those terms are used in this study.

The plan involves setting up certain guiding standards or factors which are to be applied to all parcels of real estate in determining their assessed value for purposes of taxation.

These factors, which are not so numerous as to be confusing, were determined through consultation with representative, responsible taxpayers living in the county. One fundamental principle of sound taxation was held to be that the taxpayers should have their say and part in the construction of their tax system. The people must understand the basis of their taxation and must believe that it is fair.

Outline of Procedure in Setting Up Plan

An outline of the procedure followed by Howat* in setting up his assessment plan contains the following points:

1. It is essential that the taxpayers learn the facts about the present great inequalities and unfair discrimination existing in their present assessments. Actual examples must be presented to them. Any person who is at all well acquainted with real-estate values in a county can find many examples of unfair assessment by looking at last year's tax lists.

It should be explained that the proposed plan does not have as its purpose an increase in the total amount of taxes collected. Instead, the goal is greater equality of treatment among the parcels

* Worden R. Howat, county clerk and county assessor of Trego county, Kansas, 1937-1944, is the man who set up the Trego County Real Estate Assessment Plan. In this study the plan is frequently referred to as the "Howat Plan."

now taxed. To be sure, some parcels which are now undervalued in relation to similar parcels will pay more taxes when their valuations are raised. At the same time, overvalued parcels will be assessed at less and will pay less tax.

2. Public meetings at which the plan is explained and discussed should be held in rural schoolhouses and in towns. Questions and comments from the audience should be encouraged. The public forum and round-table types of discussion will usually be best. Individual conversations between tax officials and responsible, interested citizens and between citizens themselves are very helpful. Howat wrote down important questions he wanted to ask persons who came into his office or that he saw elsewhere.

3. After consulting with many persons, the four definite factors or yardsticks of value chosen were: (1) "zone": distance from market; (2) "region": distance from eastern boundary of county as a measure of rainfall and wind-erosion (the farther west the lower the land value); (3) fertility or productivity of land; and (4) use or occupation of land: whether plow land, pasture, waste, etc. The first two factors for each parcel of property can be calculated in the office of the county clerk by using carefully prepared but inexpensive maps. (See the "Land Appraisal Map.")

The third factor, fertility, is based upon the considered judgment of each assessor. Before going out to begin their assessing, each assessor is given a guide in the form of work sheets containing characteristics and conditions to be considered in arriving at estimates of fertility and usefulness of a parcel of property. There should be a work sheet for each quarter section of land or less, if different ownership. These work sheets, when filled in by the assessor, should be turned in to the county clerk. They are shown later to interested taxpayers in justifying valuations.

The fourth factor, use, is determined by observation by the assessor. County AAA aerial photographs are helpful, too.

4. Mr. Howat took his assessors out in groups of four or five to practice judging whether a given piece (quarter section or less) of plow land or pasture was average, or above or below average. Although judgments varied some, it was interesting to discover how close together many estimates were. Similarity of judgments increased with more practice and the realization that careful consideration was being given each parcel by each assessor.

5. Land was grouped into three main classes: (1) plow land; (2) pasture; and (3) waste. Topography was the main determining

factor used by the assessors in their field estimates of whether a given piece of plow land or pasture was above, below, or average in fertility or income producing ability. Other advantages or disadvantages listed on the work sheets given the assessors were: type of road surface, elevation of roads, mail route, region (distance from eastern county boundary), zone (distance from nearest market), running water, ponds, or other types of standing water, and school.

When the assessor was through evaluating these items on the work sheet for a parcel of property, he would have arrived at a valuation of property as far as fertility and the advantages or disadvantages shown on the work sheet were concerned. He would then show in percentages on the work sheet whether the land was below, above, or average in these respects. Percentages are shown within a range of 80 percent to 120 percent, with 100 percent equaling average for plow land. Average pasture land is valued at 40 percent of average plow land, or at a ratio of 15 for plow land to 6 for pasture.

6. The final evaluation as a matter of actual practice is completed in the county clerk's office where the two factors, "region" and "zone," are computed. The reason for computing these two factors in the clerk's office is that they are merely automatic percentage deductions or additions to average value which are to be determined by looking at the county map showing the zone and region for each piece of land.

Also in the clerk's office the exact acreage of each piece of land is recorded. These acreage figures were obtained by calculations and measurements taken on the highly accurate aerial photographs which are on file in the county AAA office. These photographs of the land of the county show actual acreage in plow land, pasture, waste land, roads, and land used for public buildings, parks, streets, lakes, etc.[1]

7. The assessed value of each parcel of land (each quarter section or less) is recorded on a large wall map in the office of the county clerk. Any taxpayer can consult this map to determine fairness in assessed values. He can quickly compare the valuation of his property with that of his neighbors.

Advantages of Plan

1. Taxpayer and assessor are guided in determining real-estate values by standards that are known and understood by both.

1. Mr. Howat stated that he thought these maps were the most accurate method used in determining acreage.

2. It is reasonably easy for any taxpayer to compare the assessed value of his property with similar property in the taxing unit.

3. The assessor has definite standards to guide him in arriving at a valuation. He therefore has for future reference a record of these applied standards to justify his assessment of each parcel.

4. Once a parcel of property is classified correctly as to use, quality, and location (or any other factors which might be used), assessments thereafter will be a relatively simple and inexpensive matter. They will involve, for the most part, a routine annual check to see if the property's use, amount, or condition have changed.

5. Taxes will be paid more willingly when the taxpayer believes that the system of assessment results in fair valuation and determination of amount of taxes due.

CHAPTER II

Evidence of the Need for More Fairness in Assessed Values

The Howat assessment plan was applied to all property in Trego county, Kansas, wherever it was applicable. At least, he tried to use some uniform standards for all property in a given class. The part of the plan, however, that constituted the most valuable advance in assessment procedure was the part that applied to real estate, and particularly rural land. This study will be confined almost entirely to the application of the plan to real estate and improvements. Major attention is given farm lands, but some space is devoted to assessment of other types of real estate such as city lots and improvements in the form of dwellings and buildings.

Relative Importance of Real Estate in General Property Tax

Since this study does not cover the assessment problems for all property subject to the general property tax, a word should be said about the relative importance of real estate in the general property tax. The term "real estate" as used here includes improvements.

In 1943 in Kansas, real estate and improvements bore almost 64 percent, or two-thirds of the total general property taxes levied.[2] The percentage for 1944 was 62 percent. From these figures it is readily seen that real estate and improvements bear the brunt of the general property tax. In the case of rural real estate and improvements, we find that in 1944 farm lands had an equalized assessment of $1,016,796,971 or approximately 32 percent of the total assessed valuation of $3,178,723,147 for all property in the state.[3] Improvements on these farm lands were assessed at $128,514,334 or 4.6 percent of all property in Kansas. The relative importance of farm lands (32 percent) and improvements (4.6 percent) are shown here in order to justify the much greater attention given in this study to farm land as compared to improvements on farm lands.

Several Studies Showing Inequality in Assessments

Various studies have shown that lack of equality of treatment in determining value for taxation purposes was one of the outstanding faults of the general property tax. Practically all textbooks on public finance and taxation emphasize this weakness of the general

2. Kansas State Commission of Revenue and Taxation. *Third Biennial Report, 1943-1944*, pp. 86-88.
3. *Ibid.*, p. 77.

property tax.[4] In Kansas ample evidence has been collected to establish the existence of sizeable ineqalities in assessed values.[5] Examples of inequality in assessment *between the counties* of the state were strikingly shown in one study for the period 1933-1937. In Thomas county the average assessment ratio of rural and urban real estate combined was 44.9 percent of sale value, while in Brown county the average assessment ratio was 88 percent.[6] This means that in 1939 Brown county real-estate owners were required to pay practically twice as much in state taxes per $1,000 of sale value for their property as were the owners of property in Thomas. In monetary terms, Brown county taxes levied for the state government amounted to $1.79 per each $1,000 of sale value compared to $0.91 in Thomas county.[7]

Illustrations of inequality in assessments *among properties within a county* were discovered by Howat in Trego county when he began to make up the tax lists during his first term. Many glaring inaccuracies appeared when he reviewed the old assessed values in terms of the more fairly and accurately determined assessments indicated by his new valuations, which were obtained by the use of certain set standards for measuring values. Mr. Howat, in commenting upon changes required in valuations when he first applied his plan stated that " . . . there were many cases where some properties were doubled in valuation and others were cut half in two." [7a]

An excellent summary of the outstanding studies upon the existence and extent of inequalities in assessment in Kansas is given in "Assessment of Real Estate in Kansas," Publication No. 99 of the Research Department of the Kansas Legislative Council.[8] The summary, in part, follows:

"Several extensive surveys of actual assessments in Kansas have been made in the past 20 years. The most elaborate study of

4. For examples, see the four following standard, widely used textbooks: Harold M. Groves, *Financing Government*, Revised Edition, pp. 71-73; Alfred G. Buehler, *Public Finance*, Second Edition, pp. 413-416; William J. Shultz, *American Public Finance*, Third Edition, p. 382; and Harley L. Lutz, *Public Finance*, Third Edition, p. 513.

5. Kansas Legislative Council, Committee on Assessment and Taxation, *Survey of Kansas Tax Problems*. Publication No. 94 of the Research Department of the Kansas Legislative Council. See pp. 8-9. See, also, the report of the Kansas State Planning Board, entitled "The Relation of Assessed Values to Sales Value of Kansas Real Estate, 1933-1937," December, 1939.

6. *Ibid.*, p. 8.

7. State general property levies in 1939 were: 1.30 mills for state general fund and 0.73 mills for the soldiers' compensation bonds, a total of 2.03 mills, or $2.03 per each $1,000 of assessed values.

7a. Taken from a letter to the writer, dated May 10, 1946.

8. Research Department of Kansas Legislative Council, *Assessment of Real Estate in Kansas*. Publication No. 99, pp. 6-10.

property valuations in the earlier period was that made by Professor Englund, of the Kansas State College of Agriculture and Applied Science, which was published in 1924.[9] It covered, for a ten-year period, 10,307 parcels of farm real estate in fifteen counties, and 10,231 parcels of city real property in sixteen counties. The inequalities disclosed may be seen in Table I, in which are analyzed the valuations of 1,140 farm and 1,954 city parcels in a two-year period.

"While this material is nearly 20 years old, it is presented in connection with more recent results shown later, to demonstrate that inequalities in the assessment of real estate have been regularly recurring features of the Kansas tax system for many years, and that no substantial progress has been made in eliminating the fundamental injustice to individual taxpayers involved in the wide range assessment valuations.

"On this point, the Englund survey presents the following summary of its findings:

" '1. Inequalities between large and small properties have increased during the last 10 years. This is altogether a problem in the valuation of individual properties, and is, therefore, different from the problems of equalization among the taxing units—townships, cities and towns, and counties.

" '2. There has been no change in equalization among individual properties of farm and city real estate. Greater inequalities are found among individual properties, irrespective of size, than among the taxing units or between large and small properties. Here, again, is a problem of the valuation of separate parcels of property. Fundamentally, it is a problem of the local assessors, rather than of the boards of equalization.

" '3. Greater equality exists among townships than among the other taxing units, if data assembled . . . may be taken as typical of the state as a whole. This seems to indicate that the county boards of equalization have been quite effective in adjusting the valuation of the various townships.

" '4. There is evidence of progress in the equalization of farm real estate among the various counties, although the evidence is not pronounced. There is no evidence of change in the degree of inequality in the valuation of city real estate among the counties.

" 'These facts indicate that the principal problem lies with the local assessor. The greatest inequalities and the most marked tendency toward retrogression, that is, large as compared to small properties . . . are found at the point of his contact with property.' [10]

"The results of an analysis of 1,140 parcels of farm property and 1,954 urban parcels in Kansas are presented in Table I. These properties are grouped according to the percentage which the assessed value bears to the 'true value,' as determined by actual mar-

9. Eric Englund, *Assessment and Equalization of Farm and City Real Estate in Kansas*, Kansas Agricultural Experiment Station, Bulletin No. 232, 1924.

10. The Englund study, pp. 61-62.

RATIO OF ASSESSED TO TRUE VALUE IN KANSAS*

TABLE I.—Distribution of 3,094 real property parcels, 1921-1922

(Englund Survey, 1924)

Ratio of Assessed to "True Value"	Farm property		City property	
	Number	Percentage	Number	Percentage
Below 35%	39	3.4	127	6.5
35– 39	39	3.4	61	3.1
40– 44	70	6.1	86	4.3
45– 49	87	7.7	116	5.9
50– 54	109	9.6	160	8.2
55– 59	123	10.8	150	7.2
60– 64	124	10.9	181	9.7
65– 69	90	7.9	155	7.9
70– 74	95	8.3	157	8.0
75– 79	77	6.7	130	6.7
80– 84	64	5.6	134	6.8
85– 89	68	5.7	85	4.3
90– 94	44	3.9	86	4.3
95– 99	26	2.3	47	2.4
100–104	26	2.3	75	3.1
105–109	15	1.3	30	1.5
110–114	8	.7	19	1.0
115 and over	37	3.3	155	7.9
Totals	1,140	.....	1,954	.....

* Taken from page 9 of "Assessment of Real Estate in Kansas," Publication No. 99 of the Research Department of the Kansas Legislative Council.

ket sales. For instance, 109 farm properties, or 9.6 percent of the total number, were assessed at from 50 to 54 percent of the true value, while 160 parcels, or 8.2 percent of the city properties, were assessed within this range.

"The table is particularly significant in that it permits a comparison of the assessment ratios of farm and city property. It indicates that there is less uniformity in the assessment of city property, but that the general level of assessments of farm property is lower than that of city property. The assessed valuation of farm real estate represented in Table I is 63.6 percent of the sale price, and the corresponding figure for city real estate is 69.7 percent.

"Assessments of less than 45 percent of actual value included 13.9 percent of the city properties and 12.9 percent of the farm properties. In the upper level, 13.5 percent of the city properties were assessed at 100 percent or more, while only 7.6 percent of the farm properties were in this group. At the same time, 68.1 percent of the farm properties were assessed at less than 75 percent, as compared with only 60.8 percent of the city properties. This was the situation as reported in 1924 for the ten-year period ending in 1922,

and is to be compared with the more recent findings shown in Charts I and II.

"*Evidence in Recent Studies.* The distribution of assessment ratios for nearly three thousand farm properties in a three-year period ending in 1933 is shown in Chart I. This chart was taken from the *Howe-Miller Survey*,[11] a direct continuation of the Englund study upon which Table I is based. Table I and Chart I, while different in form, present essentially the same type of information for periods approximately ten years apart. Since Chart I covers only farm properties, it should be compared solely with the 'Farm Properties' columns in Table I.

"Chart I can be compared with the specific figures and percentages in Table I. For example, by adding together the two figures covering the ratios 70-79 percent in Table I, the 1922 figures show 8.3 percent plus 6.7 percent or 15 percent of the property in that class, in contrast to 11.3 percent in the later period. Consequently, there are real differences in the two periods as will be shown by a comparison between Table I and Chart I. They indicate that the properties assessed under 50 percent accounted for 26.6 percent of the total in 1922, but only 11.6 percent in 1933. Under-assessment of property was greater in the earlier period than in the ten years following.

"These major differences are due largely to the fact that real estate values were increasing in the earlier period, while in the later period they were declining. The general result was a greater tendency toward under-assessment from 1911 to 1922, with more over-assessment and a relatively higher level of assessment ratios during the latter part of the next ten-year period. 'From 1930 to 1933, both land values and assessed valuations declined abruptly, but the decrease in land values was greater. During this period Kansas land values decreased 38 percent while assessed valuations decreased 27 percent.' [12]

"One significant conclusion, drawn from these facts, is that *the present assessment process is relatively unresponsive to business or market conditions.* During the depression years, the average assessment ratio approached more closely true value, the Howe-Miller report showing that this average shifted from 87.8 percent in 1931 to 94 percent in 1933. This was due, however, not to any adjustments

11. Harold Howe and L. F. Miller, *Assessment and Collection of Farm Real Estate Taxes in Kansas*, Kansas Agricultural Experiment Station, Bulletin No. 283, 1939.

12. *The Howe-Miller Study*, p. 22.

CHART I.—Distribution of 2,935 Kansas Farm Properties, 1931-1933
(Howe-Miller Survey, 1939)

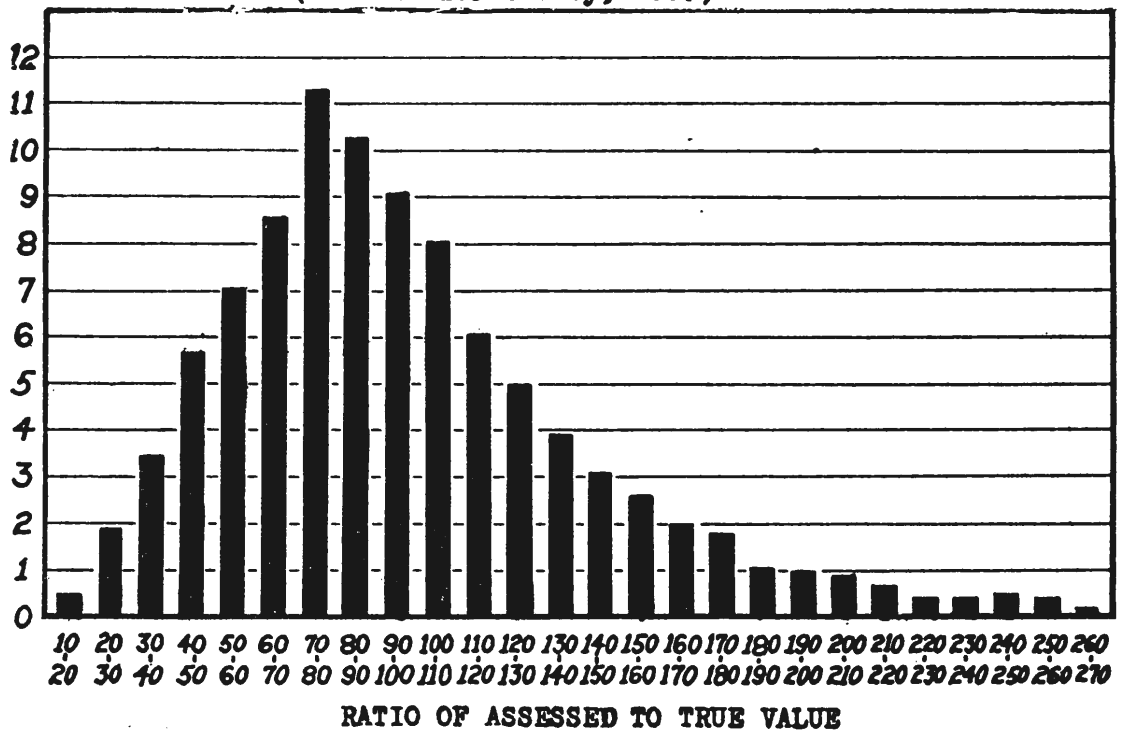
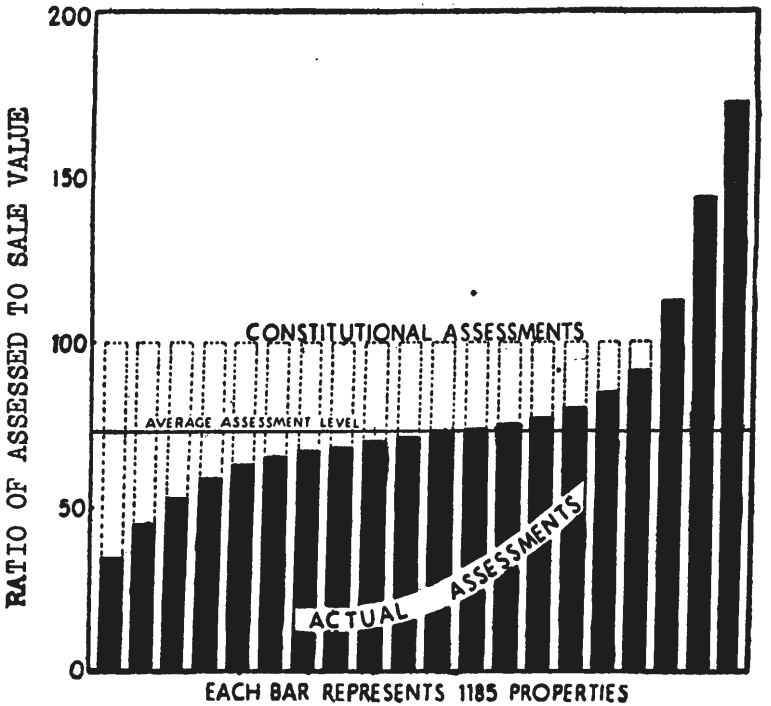


CHART II.—Inequalities in Real Estate Assessments in Kentucky



Explanation of Chart II

This chart is taken from "Assessment of Real Property in Kentucky Counties," Special Report No. 3 of the Department of Revenue of the Commonwealth of Kentucky, 1939. It is based on a state-wide survey which covered 23,695 parcels of real estate with a total sale value of $51,751,170, or approximately 3.25 percent of the estimated market value of all real property in Kentucky. All properties with ratios of below 20 percent and above 220 percent were excluded from the final figures.

Each bar represents the average assessment ratio of 1,185 parcels of real property. The line marked "Constitutional Assessment" shows the 100 percent assessment required in Kentucky as in Kansas. The area of black bars above the line marked "Average Assessment Level" represents relative overvaluation. The area of white in the bars below it shows relative undervaluation.

in the original assessments, but almost entirely to the change in sale values. Such adjustment as was made in the assessments was made at the state level, such as the 14 percent flat decrease ordered by the state board of equalization in 1932. The equalization process resulted in correcting somewhat the discrepancy between average assessment and average market price, but was powerless to correct

the inequalities as between individual properties. To illustrate, the effect would be to raise the average assessment level shown in Chart II, until it approached the 100 percent or 'constitutional assessment' line by raising all of the black bars correspondingly and leaving the curve of inequality essentially as before.

"Other studies continue to bear out the conclusions reached in these two basic reports. The assessment ratio survey made by the state planning board,[13] continuing the Kansas data from 1933 through 1937, shows the same discrepancies. Other smaller samplings of property values and some reports on various appraisals of property, which differing in detail, continue to show the same fundamental inequalities as between individual properties. The total evidence in the past 20 years is fairly conclusive that the present assessment system has made no substantial progress in developing equality and justice in the basic problem of taxation, the assessment of real estate."

Conclusions of Studies of Inequalities in Assessment

On the basis of the various studies surveyed in this chapter, the following types of inequalities in assessment in Kansas stand out:[14]

1. Inequalities between *properties of the same type.* A home on one street may be valued at several hundred dollars more than a very similar house a few blocks away, with no difference in the factors affecting value.

2. Variations between *different sections of the state* and even between different districts within a county. The assessed values assigned to farms having the same actual market values may vary greatly between counties or even between townships.

3. Differences in the treatment of *various classes or types of property.* The general assessment ratio of farm property to sale value is lower than that of city property, although there are greater inequalities in the assessment of city property.

4. Discrimination in relative assessment between *large and small properties.* A recent study in Kansas finds that for the five-year period, 1933-1937, properties selling below $1,000 were assessed at about 78 percent of their sales value, as compared with 63 percent for properties selling at more than $10,000.

Assessment Inequalities and the Future of Local Government in Kansas

The studies outlined in this chapter all lead to the unavoidable conclusion that gross inequalities exist in the assessment of real estate in Kansas. These inequalities are found wherever the old haphazard methods of assessing are used. We must accept the

13. Kansas State Planning Board, *Relation of Assessed Value to Sales Value of Kansas Real Estate 1933-1937, Inclusive,* July, 1939.

14. Taken from page vii of *Assessment of Real Estate in Kansas,* Publication No. 99 of the Research Department of the Kansas Legislative Council.

facts. The time is long overdue for us to take effective steps to improve our assessment practices. If we are to save the main, almost sole support of many of our local governments, the real-estate assessment process must be made to work more adequately and fairly.

In Kansas we think that the continuance of independent local government is essential to the correct functioning of government in general. But such independence will be reduced greatly if local governments are compelled to look to the state or federal government for an increasing amount of financial support. If the property tax on real estate is not improved in its weakest place, assessment, local governments will be forced to ask for more financial help from above even though much independence of local control is sacrificed. The Howat Plan is a successful step towards improving the most dangerous weakness in the taxation of real estate. Let us look more closely at his plan.

CHAPTER III

The Establishment and Use of Standard Factors in Assessment

The types of measures most applicable in the valuation of real estate, especially land, will vary from county to county. Conditions such as amount of rainfall and wind erosion were considered highly important in Trego county which is located in western Kansas. In eastern Kansas these two conditions are somewhat less important because precipitation is usually more adequate and wind velocities somewhat less. A difference of one or two inches in the annual average rainfall between the eastern and western edges of a county as far west as Trego may mean a difference of ten percent or so in average crop yields. In eastern Kansas where rainfall is greater such a small difference may have little effect on yields within such a short distance as the ordinary 20 or 30 miles east-west extent of a county.

These points are made to show that the factors chosen will depend upon the areas in which these measuring sticks are to be used to determine assessed value. Each county or assessing unit will need to decide upon the factors which are most applicable to that area. The goal should be to decide upon the use of meaningful standard factors which when followed in assessing all parcels of property will result in equality in assessments. Equality as used here means that the relation between normal sale price and assessed value for all parcels of property should be the same.

One of the main contributions to our tax system made by Howat was that he *did establish and use certain important standard factors in assessing.* He consulted with numerous taxpayer citizens of his county and with his assessors before finally choosing the factors to be used. As mentioned in Chapter I, public meetings were held, discussion invited, and his plan thoroughly explained to the interested taxpayers who would be affected by the proposed changes in assessment. The inherent fairness of a plan that measured all parcels of property with the same, standard yardsticks (factors) appealed to the sense of justice of his fellow citizens. It is extremely important, of course, that the factors be chosen wisely.

The Four Standard Factors of Assessment Used in the Plan

Howat finally decided to use the four following standard factors in assessing rural real estate in Trego county:

1. *Use or occupation of land*: Whether plow land, pasture, waste, public use such as roads, etc.

2. *Fertility or income producing ability of land*: Included under several different headings on his work sheets.

3. *Distance from market*, called "zone" on his work sheets and maps.

4. *Distance from eastern boundary* of the county, called "region."

1. *Use or Occupation of Land as an Assessment Factor.* Land was classified in Trego county according to use or occupation. The three taxable classes were: (1) Plow land; (2) pasture; and (3) waste. A fourth tax exempt class could be added: Land used for public purposes, such as roads, streets, school yards, parks and lakes. The aerial photographs taken by the Agricultural Adjustment Administration for use in the AAA program were studied and measured to determine the amount of acres in the various classes. These photographs were found to be quite accurate. A number of changes in the acreage totals appearing on tax lists of former years were made on the basis of maps constructed from these photographs.

Howat wanted to be as accurate and objective as possible in arriving at assessments. In the process of valuation of parcels of property, objective standards were to be used as much as was practicable. Even the name of the owner was left off the work sheets in order to avoid any tendency for names to influence judgments in assessing. Aerial photographs proved to be one of the most helpful of the objective standards. Let us quote Mr. Howat.[15]

"In starting out to assess, we forgot ownership in its entirety. The name of the man who owns the property does not appear on our work sheet. There is nothing but a description of the land. We do know this: From surveys made by the aerial maps from the Triple A program under allotment and parity payment, we found all our quarters and sections were not the same size. We found out that in later years there had been some 150-foot roads taken off. We had the information in the Triple A office and we thought we would use that available information for the completion of a tax plan.

"If you will take the work sheet (see page 2 of this work sheet), you will notice at the bottom, I have a place for description. Every quarter of land, or less, if a different ownership, has just such a work sheet. From the transfer records in the office of the register of deeds showing ownership, we placed there the legal description. The acres were broken down as they appeared on the aerial map.

15. Report of Kansas State Board of Agriculture, April, 1944. *Trego County Plan of Real Estate Appraisal*, pages 99-106. See, especially, page 100.

"In one particular quarter there might be one hundred acres of broken land, four acres of waste land, or reclamation land, or pasture land, and so on. When that is added up there may not be the full acreage. There may be 157 or 162. We know the sections from one to six on the north and 17, 18, 19, 30, and 31 down the west side are correction lines.

"That does not mean your intersections are all true. We actually have a section in Trego county which has 678 acres. We have another quarter which has only 144. So when we are trying to arrive at an assessment in equality with your neighbor, we want to know the exact acreage we are assessing."

2. *Fertility of Land as an Assessment Factor.* Fertility or income producing ability are exceedingly important indicators of land values. After the land had been classified according to use and the acreage devoted to each use had been determined, the next step was to decide upon the relative values to be placed upon plow land and pasture. Presumably waste land would be carried at a very low value. The two main types of rural land of importance for taxation purposes were, therefore, plow land and pasture.

Howat held a meeting of his assessors. They spent some time figuring out the costs and net incomes available from the various possible uses to which plow land and pasture could be put. They considered the long run average conditions to be expected in the way of yields, costs of farming, and market prices. Their calculations in 1938 led them to place an income value of $15 per acre on plow land and $6 per acre on pasture. Mr. Howat explains it this way: [16]

"We have two classifications—pasture land and plow land. So this group took an acre of average plow land in Trego county. Then on the blackboard we farmed that to every crop adaptable. We took it under a base of what we thought in our judgment was a normal condition, not at the high price nor at the extreme low.

"Then we took an acre of pasture land and figured it on the basis of turning in a steer or a cow and calf, and expenses of three months on other feeds, and took it on every form of its adaptability to production, and then on a normal average we arrived at a ratio of 15 to 6. In other words, we thought the acre of plow land, under normal conditions, would produce a value of $15 where an acre of grass land would produce $6.

"Probably some of you think that wouldn't work down in your

16. *Ibid.*, p. 100.

county. It might not, of course, but you would have to set up your own basis. That's the democratic way of working things out. You think this and I think that, and then we vote on it and we get a majority vote and then we go ahead with the majority opinion."

The next step in measuring fertility or income producing ability was to discover a reasonably accurate method of deciding whether a given piece of land was average, or above or below average. Here again Howat worked with his assessors. He went out with groups of four or five of them, and they practiced assessing actual properties. Howat puts it this way: [17]

"Then we said, 'maybe my idea of an average acre isn't like yours,' so four or five went out together, took a quarter of land and wrote down what we thought was an average acre. We were a little off, but we forgot individuality and worked in unity to arrive at what we were trying to do—to arrive at a comparable and equitable assessment on all parcels.

"So we started with this work sheet. (See page 2 of work sheet.) We had provided the work sheet, as I said before, and called the average $15 on plow land and $6 on grass land. If in the assessor's opinion the land was rated at fifteen percent or twenty percent above the average, he would put it in that way. He could drive to a quarter where some land was poor, some broken, and he could average that. Where it might be flat and there would be big draws, and so on, he estimates how much was waste."

Mr. Howat told the writer that although the judgments of the assessors varied some, "It was interesting to see how close together most estimates were." Similarity of judgments increased with more practice and the realization that careful consideration was being given each parcel by each assessor.

The work sheet for the assessors contains spaces for recording the number of acres of land that they judge to be average or above or below. The range for plow land ("broke land") is from eighty percent to 120 percent, with average being 100 percent. Pasture land, in accordance with the 15 to 6 ratio, is valued in percentage brackets starting with 40 percent as average.

Next, in arriving at the value of a farm or piece of land it was decided that consideration should be given to the existence or lack of certain things such as ample water or good roads. Topography was an important determiner used by the assessors in deciding whether land was average or above or below. On the work sheet

17. *Ibid.*, pp. 100-101.

Work Sheet For Use in Assessing Real Estate (Page 1)

Supplement to Tax Com. Form 3a (Revised 1938)

Real Estate Assessment in.....Township.....County.....19.....

Name of owner.....P. O. Address.....Real estate description:.....

Common S. D. No.....R. F. D. No.....Part.....Sec.....Twp.....Range.....Total A.....

BUILDINGS AND OTHER IMPROVEMENTS

Dwelling

Constn.	Story		Room	H.	W.	L.	Cu. ft.	At	Value
		%	Plus		Minus				
Age									
Foundtn									
Basement									
Roof									
Heat									
Condition									
									Total

Other Buildings

	Const.	Age.	Fndtn.	Condn.	H.	W.	L.	Cu. ft.	Value	Total value
Barn										
Granary										
Garage										
Ch. House										
Windmill										

Value of lands (exclusive of improvements) from back page.....

Value as set by equalization board.....

Remarks:

WORK SHEET FOR LAND (PAGE 2)

Broke land		%	Acres	@	Adjust
	A	120			
	B	110			
Average	C	100			
	D	90			
	E	80			
	F				
	G				
Subtotal					

NATIVE GRASS

Tillable					
Avg. P		40			
Rolling		30			
Rough		25			
Poor					
Subtotal					

MISCELLANEOUS

Lots					
Waste					
Orchard					
Timber					
Recl					
Road					
Subtotal					
Total					

House	Barn	Misc.	Total

Advantages and disadvantages	D	Plus	%	Minus
Hrd. S. road				
Elev. road				
Mail route				
Region				
Zone				
Rn. water				
Other water				
School				
Pond				
Totals				
Compt. figure				

Part	Sec.	Twp.	Range	Broke	Pasture	Total acres

these things were listed as "advantages or disadvantages." They include type of road surface, elevation of road, mail route, region, zone, running water, other water, school, pond, and spaces for writing in additional advantages or disadvantages if they are found by the assessor. The assessor is to use his judgment in recording the percentage to add or deduct from average for each of these items when assessing a parcel of land. The assessment should be uniform over the total unit. For the items "region" and "zone," the percentages to add or deduct are not based upon the judgment of the assessor. Instead, they are computed automatically by looking them up on the county map showing zones and regions. This, as a matter of practice, is done in the office of the county clerk along with the final computations of the assessed value. This saves considerable work for the assessors who usually have more than enough to keep them busy in the field.

It is evident after studying the work sheets used by assessors in Trego county that the assessor's job would still be a very important one. A great deal of sound judgment and common sense must be exercised in classifying land as average or as a certain percentage above or below average. The exact percentages to add or subtract for the various "advantages or disadvantages" also require the use of good judgment. It is obvious, however, that the work sheets can serve as definitely helpful guides in arriving at fair and impartial assessments.

Howat impressed upon the writer the fact that the decisions about the items to be incuded in the work sheets, the factors to be considered, as well as the installation of the plan were made possible only because his assessors, his office employees, and the great majority of the taxpayers were deeply interested in better assessment. Howat said, "We have seven townships, some of them large, and so we have seven elective trustees (assessors) and eight appointees. I got together with them and we spent about three days with a blackboard and chalk. All this work on the part of the assessors was donated because they were just interested."

3. *Zone: Distance from Market as an Assessment Factor.* It is in the application of the factors of "zone" and "region" that the greatest amount of objectivity can be attained. Once the "zones" and "regions" are decided upon, marked on the county map and percentage values assigned to each, the application of each factor to each piece of farm land is an impartial, automatic process of merely "reading" the map. An exercise of sound judgment was re-

quired, however, in setting the values to give to "zones" and "regions." It is necessary, therefore, to consider how these zone and region factor values were determined. "Region" is considered in section 4 of this chapter. In this section "zone" is discussed.

Distance from market or "zone" is important in agriculture because cost of transporting products to the market is a significant item. The cost of hauling wheat, the main crop in Trego county, was used to help measure the percentage of value to add to or subtract from a given parcel of property when applying this market or zone factor.

The land appraisal map for Trego county, shown on the opposite page, contains circular zones centering around eight town markets. Three of these markets are in the county and five are outside. The zones vary in distance in miles from market as shown in the left hand vertical column of numbers labeled, "Miles from market." The percentage to add or subtract for this market zone factor is given in the nearby vertical column entitled, "Factor percent."

The zones range from one mile in width up to 2.5 miles as they move out from the center. The percentage added to value as you move toward a market ranges from zero in the "N" or neutral zone upward by 3 percent plus in each zone to 15 percent plus in the center zone in which the market is located. Moving away from market beyond zone "N," 3 percent is subtracted for each zone.

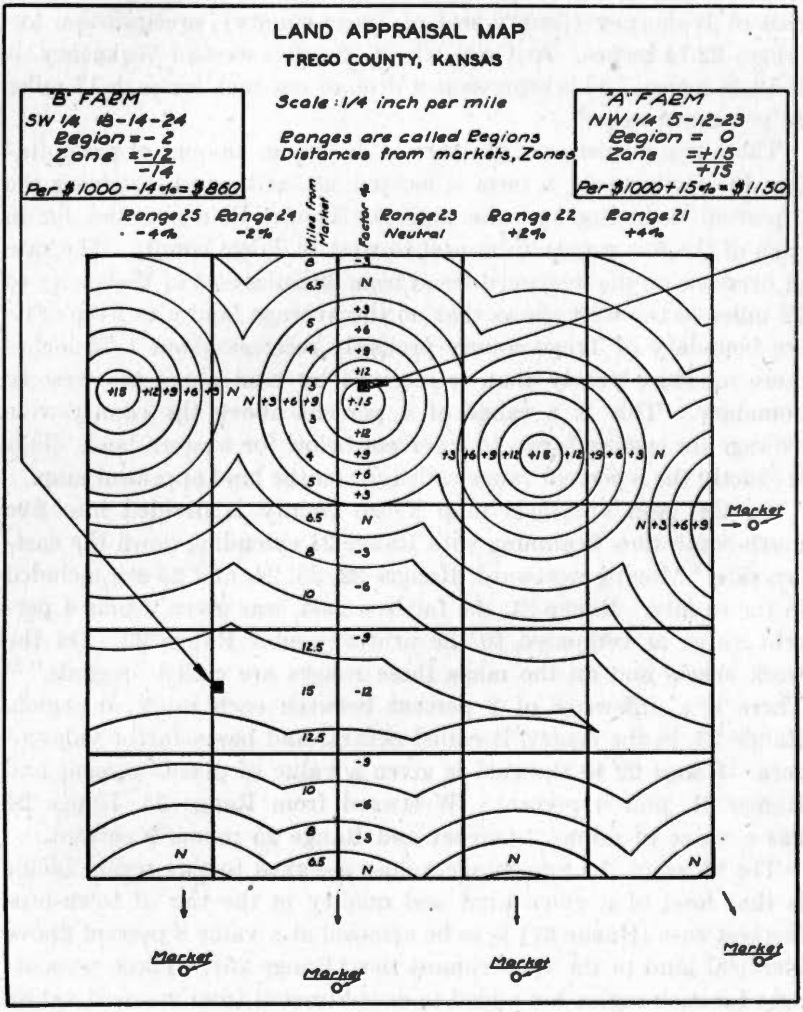
Land is assessed in units of a quarter section or less. If a part of a quarter section or parcel lies in a given zone and part in an adjacent zone, the whole quarter section or parcel is listed as falling in the zone which contains the majority of the acreage.

Another justification for using distance from market as a factor is the advantage of living near a town where retail stores, schools, churches, hospitals, and movies or other types of recreation are more accessible. These things may have rather intangible values but they are important in determining the pleasantness of life for farm families.

4. *Region: Distance from Eastern Boundary of County (Precipitation Differential) as an Assessment Factor.* The factor called "region" was considered an important indicator of land productivity, and therefore value, because it involves the geographical location of the land. Land situated in the eastern part of the county receives more rain on the average than land in the western part. The exact long run differences in precipitation could not be obtained from

records because detailed records were incomplete. A careful guess was made, nevertheless.

Weather records for one or two stations in each county in the United States covering the last 35 to 40 years are available.[18] The



average amount of precipitation varies from 42 inches in extreme southeastern Kansas to 16 inches along the western boundary line.[19] This difference of 26 inches is roughly equal to a drop of one inch

18. See: *1941 Yearbook of Agriculture, "Climate and Man."* United States Department of Agriculture. For Kansas, see pages 873-883.

19, *Ibid.*, page 882.

per each 15 miles as you move westward across the 400 mile east-west extent of Kansas. A comparison between the average annual precipitation in several counties in an east-west line with Trego is helpful, too, in arriving at the rate of decline in precipitation the farther west land lies. At Hays (in Ellis county), about 30 miles east of Wakeeney (county seat of Trego county), precipitation averages 22.74 inches. At Gove, about 32 miles west of Wakeeney, it is 19.25 inches. This represents a drop of one inch for each 17 miles as you move west.[20]

These two measures of the rate of decline in amount of precipitation the farther west a farm is located, go far toward justifying the 2 percent deduction in value that the Howat Plan provides for in each of the five ranges from east to west in Trego county. The rate of decrease on the westward trend from 30 miles east of Wakeeney to 32 miles to the west shows that on the average land along the eastern boundary of Trego county probably receives about 1.75 inches more moisture yearly than is received by land along the western boundary. This is a range of 4 percent above the county-wide average for eastern farms to 4 percent below for western land. This is exactly the 8 percent range called for on the land appraisal map.

On the land appraisal map Trego county is divided into five north-south tiers beginning with Range 21 extending down the eastern side. Moving westward, Ranges 22, 23, 24, and 25 are included in the county. Range 21, the farthest east, was given a plus 4 percent value as compared to the neutral center Range 23. On the work sheets and on the maps these ranges are called "regions."[21] There is a difference of 2 percent between each range or region. Range 23, in the center, is called neutral and has a factor value of zero. Range 22 to the east is given a value of plus 2 percent and Range 21, plus 4 percent. Westward from Range 23, Range 24 has a value of minus 2 percent and Range 25 minus 4 percent.

The effect of the percentage values assigned to this region factor is that land of a given kind and quality in the tier of townships farthest east (Range 21) is to be assessed at a value 8 percent above identical land in the westernmost tier (Range 25). These percentages for each region are added to or subtracted from assessed values as recorded on the work sheets by the assessors. The adjustments for "region" as well as "zone" are computed in the office of the county clerk.

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20. *Ibid.*, pp. 873-874.

21. It should be remembered that if a parcel of land lies in two regions or zones it is classed as falling in the region or zone that contains the majority of the acreage of the parcel.

Illustration of the Use of Land Appraisal Map

For purposes of illustration, let us assume that two sample farms, "A" and "B," had both been turned in on the assessor's work sheets as worth $1,000 after all the factors on the work sheets, except region and zone, had been figured. Now, in the case of farm "A" (see top right-hand corner of map) we see that it is located in Range 23 which is neutral. In the computation the value added or deducted for "region" is zero. Next it is seen that farm "A" is in the market zone immediately surrounding the nearest market, and so 15 percent is added to its value for the "zone" factor. Farm "A" will be assessed therefore at $1,000 plus $150 or $1,150. Farm "B" (see upper left-hand corner of map), on the other hand, which is farther west and a longer distance from its nearest market, will be assessed at $860 after 2 percent is deducted because of its region and 12 percent for its zone. These final assessed values can then be recorded on the work sheets in the proper places.

Adjusting Values Under Plan to State Equalized Values

One additional step remains in the process of assessment under the Howat Plan. It is the task of getting the valuations in the county in line with the valuations of similar property throughout the state as finally equalized by the county and state boards of equalization. If this were not done, state property taxes in the Howat Plan county would bear more heavily or lightly than is the average for other counties in Kansas. Also property tax limitation laws would affect the governmental income possibilities differently in counties using the Howat Plan than in those counties not using the plan.

This process of getting valuations in line with others in the state was rather easily solved by Mr. Howat. He decided to use Ness county, which borders on the south side of Trego, as a comparable county. The average assessed values of crop land and pasture, as equalized by the state board of equalization for the last preceding real estate assessment period, were compared with average valuations of similar land obtained by the application of the Howat Plan in Trego. The valuations in Trego were then changed so that average pasture and average crop land in both counties had the same relationship between their assessed values as was given to them when equalized by the state board. Of course, all land whether average or above or below average, was changed by the same percentage.

This process of adjustment could be applied between counties with different equalized values, too. For example, suppose county A had an equalized value of $20 per acre for average crop land and county B in which the Howat Plan was being used, had been equalized at $15 per acre by the state board for the preceding year. The valuations obtained under the Howat Plan would then need to be adjusted so that the final valuation of average crop land in the Howat Plan county was equal to 75 percent of the valuation in county A. It would be possible to make comparisons with more than one county, if that were considered more satisfactory. The averages of the several counties could be used.

This final step in no way reduces the desired results from the use of the Howat Plan. The adjustment merely puts average valuations in the county where the plan is applied in line with average valuation in other counties. The goal of the plan, that is fairness of assessments *between properties within the county,* is successfully accomplished. "Fairness" and "equality" in assessment of real estate are achieved when each parcel of property is assessed at the same percentage of normal market value or of income producing ability. This will still be the outcome from the application of the plan in a county.

Assessing Buildings and Town Real Estate: [22]

Little has been said so far in this study about the technique used in assessing buildings and nonfarm or town property. In general, Howat used the same procedure of first discussing the proposed improvements in assessments with interested, responsible property owners. He talked with them individually and in groups. He ex-

22. For the process of evaluating buildings, see the several articles which are contained in the mimeographed copies of *Subjects as Discussed at the Conference of Kansas Assessing Officers, January 14, 15, 16, 17, in 1946.* This meeting which was attended by the county clerks of Kansas, was under the direction of the Kansas State Commission of Revenue and Taxation, and was held with the coöperation of Kansas State College, Manhattan, and the Kansas County Clerks Association. Several businessmen who are experts in the appraisal of real estate also addressed the conference. The problems facing assessors are set forth in an interesting and enlightening fashion in this compilation of the subjects discussed at this meeting of county clerks.

The Assessor's Manual prepared by the Kansas State Commission of Revenue and Taxation and revised in 1945, also contains many useful suggestions. Two other publications which contain useful information have been published by the National Association of Assessing Officers, 1313 East 62d Street, Chicago, Ill.: *Assessment Principles,* and *Urban Land Appraisal Manual.*

The usefulness of a "data file" was explained to the 1946 Conference of Assessment Officers, by Mr. David Neiswanger, president of the Neiswanger Investment Company. "This file contains a record of sales that have been made, advertisements that have appeared in the papers, data pertaining to leases, the reported cost of new construction, and all other information that can be gathered together relating to the sale, construction and renting of real estate. It will give you a great deal of satisfaction, if a question arises with respect to the value of a property to be able to go to a file and pull out data covering sales and rentals recently related to the property under consideration, or in any event to properties in the immediate neighborhood, and in the same block. Income data, that is the rental that is being currently paid particularly for business properties, should be accumulated and become an important part of the file."

plained his proposals and listened to their suggestions and criticisms. The assessment factors ". . . used in business buildings and urban properties were those that were agreed upon by the city council (of Wakeeney) and the school board." [23] When the time came to appoint the town assessor for Wakeeney, the person selected was considered to be well qualified for the job.

A work sheet to guide the process of valuation was given to the assessor. (See page one of the work sheet.) The main things listed to be considered in regard to dwellings are type of construction, number of stories, number of rooms, height, width, and length, cubic feet, age, foundation, basement, heat, roof and condition. For "other buildings" the list was about the same, although not quite so long. In an interview with the writer, Howat pointed out that the assessor was asked to consider in addition such factors as whether a business building had an east or west front and its location in the block and in the business section. Values of dwellings and other buildings were also to be based somewhat upon conditions of adjacent streets, and water and sewer connections.

In summarizing the actual process followed in evaluating urban buildings, Howat wrote as follows: "The business buildings were pretty much worked out from the standpoint of rental, as receipts and upkeep, as expenses and not as whether they were new or old buildings. Residential property was affected by factors, mutually agreed upon by the above citizens (city council and school board members), such as north and west fronts being less desirable, were given a factor of percentage depreciation over those that had south or east fronts. The exact (percentage) amount of these factors is secondary in this plan as some other city might find, from a common sense viewpoint, that they would want to increase or decrease those that we used." [24]

The Cost of Installing the Plan

The cost of installing the Howat Plan of assessment in Trego county was quite moderate. In 1934 when the old procedure was followed in the county real estate assessments cost $1,700. When the plan was applied in 1938, the county spent $2,100.[25] That was an increase of $400, which was only seven cents per capita.[26] This

23. Letter from Mr. Howat to the writer, dated May 10, 1946. Words in parentheses were added by the writer.

24. *Ibid.*, words in parentheses were added by the writer.

25. *Report of Kansas State Board of Agriculture,* April, 1944, "The Trego County Plan of Real Estate Appraisal," p. 102.

26. This per capita figure is based on the 1938 population of 5,757 as shown in the *Thirty-first Biennial Report of the Kansas State Board of Agriculture (1937-1938)*, p. 392.

seven cents per capita could be considered as the extra cost involved in installing the plan. It is important to remember that even this small additional cost was not required in the next real estate assessment year. In fact, Mr. Howat said that, "In 1942, the real estate assessment came in and we never spent a dime. We just keep the sheets up to date." [27]

The writer was informed by the present Trego county clerk, Mrs. Berniece Groft, that the 1946 real-estate assessment also involved little or no additional expense. It should not be inferred, however, that no additional funds will ever need to be spent after the first installation costs of the plan have been met and after the first assessment has been completed. Each year it should be determined whether or not the real estate's use, amount and condition have changed enough to warrant a change in valuation. Although such expenses are necessary, nevertheless they will amount to much less in the future years than the average costs were before the plan was applied. This experience with low costs in Trego county may not be repeated as a rule in all counties. But even if such a plan would cost as much as or more than the old haphazard assessment procedure, fairness in valuations and the resulting tax bills would certainly justify the expenditures involved in installing and administering such an assessment plan.

Attitude of Taxpayers Toward Plan

The taxpayers of Trego county seem to be well satisfied with the operation of the Howat Plan. Those taxpayers who answered a brief questionnaire all checked "yes" after the following question: "In general, do you believe that the plan for assessing real estate for taxation which was put into effect in Trego county in 1938 has resulted in more fairness in assessed values?" [28] The questionnaire was not sent to enough persons to be considered conclusive evidence by itself. But it does corroborate the generally favorable reaction found when the plan is mentioned in the county.

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27. *Report of Kansas State Board of Agriculture,* April, 1944, "The Trego County Plan of Real Estate Appraisal," p. 102.

28. Forty names were selected at random from the 1946 tax list, and the following two questions were mailed to them: 1. "In general, do you believe that the plan for assessing real estate for taxation which was put into effect in Trego county in 1938 has resulted in more fairness in assessed values?" Yes——, No——. 2. "What changes or improvements in the assessment plan, if any would you suggest?" Replies were obtained from 16 persons, or 40 percent of those to whom questionnaires were sent. Every reply was favorable to the Howat Plan.

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